Gas Laws Group Quiz – Staple them altogether when you are done, I will pick one to grade randomly.

Name Period

(1 atm = 1.013x105 Pa = 101.3 kPa = 14.7 psi = 760 Torr; 1 m3 = 1000 liters; pabsolute = pgauge + 1 atm; )

1. Convert 12.0 psi absolute to Torr gauge
2. Convert 2000. psi gauge absolute to Pa absolute
3. Fred has 31.8 grams of Helium gas in a giant Florence flask that has a diameter of 0.380 m (ignore the volume of the neck of the flask) at 210. oC. What is the Pressure in Pa? In psi?
4. A gas is at an absolute pressure of 630. Torr when its volume is 1.80 liters. If the volume of the container is changed to 5.40 liters (by moving a piston) what is the new pressure when the temperature returns to the same it started at?
5. A gas takes up 4.20 liters at a temperature of 20.5 oC and a gauge pressure of 3.40 psi. What volume does it take up at 89.0 oC, and a gauge pressure of 34.2 psi?